

BARRE TOWN WATER SYSTEM – VT0005566

Consumer Confidence Report – 2013

This report is a snapshot of the quality of the water that we provided in 2013. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. This report is designed to inform you about the quality water and services we deliver to you every day. To learn more, please attend any of our regularly scheduled meetings which are held:

Tuesday Evenings at 7: P.M at the Barre Town Municipal Building (location).

The person who can answer questions about this report is: Carl Rogers

Telephone: 802-479-9331 and/ or Email crogers@barretown.org

Water Source Information

Your water comes from

Source Name	Source Water Type
WELL 1	Groundwater
BARRE CITY - DIX RESERVOIR	Surface Water
GRANITEVILLE SOURCES	Ground Water under the Influence of Surface Water

The State of Vermont Water Supply Rule requires Public Community Water Systems to develop a Source Protection Plan. This plan delineates a source protection area for our system and identifies potential and actual sources of contamination. Please contact us if you are interested in reviewing the plan.

Drinking Water Contaminants

The sources of drinking water (both tap water and bottled water) include surface water (streams, lakes) and ground water (wells, springs). As water travels over the land's surface or through the ground, it dissolves naturally-occurring minerals. It also picks up substances resulting from the presence of animals and human activity. Some "contaminants" may be harmful. Others, such as iron and sulfur, are not harmful. Public water systems treat water to remove contaminants, if any are present.

In order to ensure that your water is safe to drink, we test it regularly according to regulations established by the U.S. Environmental Protection Agency and the State of Vermont. These regulations limit the amount of various contaminants:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides, may come from a variety of sources such as storm water run-off, agriculture, and residential users.

Radioactive contaminants, which can be naturally occurring or the result of mining activity

Organic contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also come from gas stations, urban storm water run-off, and septic systems.

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the past year. It also includes the date and results of any contaminants that we detected within the past five years if tested less than once a year. The presence of these contaminants in the water does not necessarily show that the water poses a health risk.

Terms and abbreviations - In this table you may find terms you might not be familiar with. To help you better understand these terms we have provided the following definitions:

Maximum Contamination Level Goal (MCLG): The “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLG’s allow for a margin of safety.

Maximum Contamination Level (MCL): The “Maximum Allowed” MCL is the highest level of a contaminant that is allowed in drinking water. MCL’s are set as close to the MCLG’s as feasible using the best available treatment technology.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of disinfectants in controlling microbial contaminants.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. Addition a disinfectant may help control microbial contaminants.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

90th Percentile: Ninety percent of the samples are below the action level. (Nine of ten sites sampled were at or below this level).

Treatment Technique (TT): A process aimed to reduce the level of a contaminant in drinking water.

Parts per million (ppm) or Milligrams per liter (mg/l): (one penny in ten thousand dollars)

Parts per billion (ppb) or Micrograms per liter (µg/l): (one penny in ten million dollars)

Picocuries per liter (pCi/L): a measure of radioactivity in water

Nephelometric Turbidity Unit (NTU): NTU is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Running Annual Average (RAA): The average of 4 consecutive quarters (when on quarterly monitoring); values in table represent the highest RAA for the year

Detected Contaminants BARRE TOWN WATER SYSTEM

Microbiological	Result	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2013				

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Barium	02/24/2011	0.022	0.022 - 0.022	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate	02/21/2013	1.4	1.4 - 1.4	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Combined Radium	02/24/2011	1.17	1.17 - 1.17	pCi/L	5	0	Erosion of natural deposits
Radium-226	02/24/2011	0.06	0.06 - 0.06	pCi/L	5	0	Erosion of natural deposits
Radium-228	02/24/2011	1.11	1.11 - 1.11	pCi/L	5	0	Erosion of natural deposits

Disinfection ByProducts	Monitoring Period	RAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2013	11	2.1 - 7.6	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Date	90 th Percentile	95 th Percentile	Range	Unit	AL	Sites Over AL	Typical Source
Copper	2011 to 2013	0.48	0.74	0.03 - 0.99	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Lead	2011 to 2013	2	3	0 - 3	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits
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Violation(s) that occurred during the year

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. The below table lists any drinking water violations we incurred during 2013. A failure to perform required monitoring means we cannot be sure of the quality of our water during that time.

Type	Category	Analyte	Compliance Period
No Violations Occurred in the Calendar Year 2013			

Additional information (including steps taken to correct any violations listed above)

Health information regarding drinking water

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from EPA's Safe Drinking Water Hotline (1-800-426-4791).

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. BARRE TOWN WATER SYSTEM is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Public Notice - Permit to Operate Issued October 1, 2013: The Water System is required to notify all users of the following compliance schedule contained in the Permit to Operate issued by the State of Vermont Agency of Natural Resources:

1. On or before January 1, 2014, the Permittee shall submit an electronic copy of an O&M Manual for review and approval by the Secretary.
2. On or before November 1, 2013, the Permittee shall submit an improvement plan to the Secretary, identifying how the Water System intends to establish a physical separation/air gap and eliminate the cross connection hazard at the Adams Granite service connection served by both the Water System and a domestic on-site well.
3. On or before December 1, 2013, the Permittee shall color code all fire hydrants that are unable to meet the hydraulic requirements of the Rule and submit written notice to the local fire department as to the limitations of these hydrants.

4. On or before December 1, 2013, the Permittee shall replace the storage tank access hatch gaskets on the Waterman Street water storage tank in order to ensure a water tight seal and protect the sanitary quality of the water within the tank.
5. On or before December 1, 2013, the Permittee shall take all necessary repairs to the Waterman Hill water storage tank in order to ensure a water tight seal between the roof of the storage tank and the access riser.

Public Notice - Uncorrected Significant Deficiencies: The system is required to inform the public of any significant deficiencies identified during a sanitary survey conducted by the Drinking Water and Groundwater Protection Division that have not yet been corrected. For more information please refer to the schedule for compliance in the system's Operating Permit.

Date Identified	Deficiency	Facility
07/21/2010	Inadequate Cross-Connection Controls (Storage Bypass)	DISTRIBUTION SYSTEM

The Town intends to work with Adams Granite during the summer of 2014 to provide the necessary air gap to eliminate the hazard with potential cross connection due to contamination from their alternate on-site water source.

Distribution information

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place and distributing copies by hand or mail.

GRANITEVILLE FIRE DISTRICT 4 – VT0005248

Consumer Confidence Report – 2013

This report is a snapshot of the quality of the water that we provided in 2013. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. This report is designed to inform you about the quality water and services we deliver to you every day. To learn more, please attend any of our regularly scheduled meetings which are held:

2nd Monday of each month @ 6:30 P.M. (date/time) at Quarry Hill Apts Community Room (location).
604 Graniteville Rd. Lower Graniteville

The person who can answer questions about this report is: (print) Alice W. Bartlett

Telephone: (802)476-6952/(802)479-9391 and/ or Email _____
 (H) (W)

Water Source Information

Your water comes from

Source Name	Source Water Type
SPRINGS 1-16 (B)	Ground Water under the Influence of Surface Water
SPRINGS 1 - 16 (C)	Ground Water under the Influence of Surface Water
RES 1 NORTH INF GALL (B)	Ground Water under the Influence of Surface Water
RES 1 NORTH INF GALL (C)	Ground Water under the Influence of Surface Water
RES 1 NORTH INF GALL (D)	Ground Water under the Influence of Surface Water
RES 1 NORTH INF GALL (E)	Ground Water under the Influence of Surface Water
RES 1 NORTH INF GALL (F)	Ground Water under the Influence of Surface Water
RES 1 NORTH INF GALL (G)	Ground Water under the Influence of Surface Water
RES 1 NORTH INF GALL (H)	Ground Water under the Influence of Surface Water
RES 1 SOUTH INF GALL (B)	Ground Water under the Influence of Surface Water
RES 1 SOUTH INF GALL (C)	Ground Water under the Influence of Surface Water
RES SOUTH INF GALL (D)	Ground Water under the Influence of Surface Water
RES SOUTH INF GALL (E)	Ground Water under the Influence of Surface Water
GALE RES INF GALL (B)	Groundwater
GALE RES INF GALL (C)	Groundwater
GALE RES INF GALL (D)	Groundwater
GALE RES INF GALL (E)	Groundwater
GALE RES INF GALL (F)	Groundwater
GALE RES INF GALL (G)	Groundwater
RES 3 SPRINGS (B)	Groundwater
RES 3 SPRINGS (C)	Groundwater
# 1 WELL	Ground Water under the Influence of Surface Water
GALE RES INF GALL (A)	Groundwater

RES 1 NORTH INF GALL (A)	Ground Water under the Influence of Surface Water
RES 1 SOUTH INF GALL (A)	Ground Water under the Influence of Surface Water
RES 3 SPRINGS (A)	Groundwater
SPRINGS 1-16 (A)	Ground Water under the Influence of Surface Water
STONE SPRING	Ground Water under the Influence of Surface Water
WELL 3	Ground Water under the Influence of Surface Water
BARRE TOWN CONNECTION	Surface Water

Buyer Name	Seller Name
BARRE TOWN WATER SYSTEM	BARRE CITY WATER SYSTEM

The State of Vermont Water Supply Rule requires Public Community Water Systems to develop a Source Protection Plan. This plan delineates a source protection area for our system and identifies potential and actual sources of contamination. Please contact us if you are interested in reviewing the plan.

Drinking Water Contaminants

The sources of drinking water (both tap water and bottled water) include surface water (streams, lakes) and ground water (wells, springs). As water travels over the land's surface or through the ground, it dissolves naturally-occurring minerals. It also picks up substances resulting from the presence of animals and human activity. Some "contaminants" may be harmful. Others, such as iron and sulfur, are not harmful. Public water systems treat water to remove contaminants, if any are present.

In order to ensure that your water is safe to drink, we test it regularly according to regulations established by the U.S. Environmental Protection Agency and the State of Vermont. These regulations limit the amount of various contaminants:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides, may come from a variety of sources such as storm water run-off, agriculture, and residential users.

Radioactive contaminants, which can be naturally occurring or the result of mining activity

Organic contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also come from gas stations, urban storm water run-off, and septic systems.

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the past year. It also includes the date and results of any contaminants that we detected within the past five years if tested less than once a year. The presence of these contaminants in the water does not necessarily show that the water poses a health risk.

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Parts per million (ppm) or Milligrams per liter (mg/l): (one penny in ten thousand dollars)

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Nephelometric Turbidity Unit (NTU): NTU is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Running Annual Average (RAA): The average of 4 consecutive quarters (when on quarterly monitoring); values in table represent the highest RAA for the year

Detected Contaminants GRANITEVILLE FIRE DISTRICT 4

Microbiological	Result	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2013				

Chemical Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Nitrate	04/11/2013	0.37	0.37 - 0.37	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Combined Radium	01/17/2013	1.47	1.47 - 1.47	pCi/L	5	0	Erosion of natural deposits
Gross Alpha	01/17/2013	0.291	0.291 - 0.291	pCi/L	15	0	Erosion of natural deposits
Radium-226	01/17/2013	1.24	1.24 - 1.24	pCi/L	5	0	Erosion of natural deposits
Radium-228	01/17/2013	0.233	0.233 - 0.233	pCi/L	5	0	Erosion of natural deposits

Disinfection ByProducts	Monitoring Period	RAA	Range	Unit	MCL	MCLG	Typical Source
Total Trihalomethanes	2013	3	1.8 - 2.7	ppb	80	0	By-product of drinking water chlorination
Total Trihalomethanes	September 2012	3	1.8 - 2.7	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Date	90 th Percentile	95 th Percentile	Range	Unit	AL	Sites Over AL	Typical Source
Copper	2011 to 2013	0.29	0.32	0.073 - 0.35	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead	2011 to 2013	11	16	0 - 21	ppb	15	1	Corrosion of household plumbing systems; Erosion of natural deposits

Violation(s) that occurred during the year

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. The below table lists any drinking water violations we incurred during 2013. A failure to perform required monitoring means we cannot be sure of the quality of our water during that time.

Type	Category	Analyte	Compliance Period
No Violations Occurred in the Calendar Year 2013			

Additional information (including steps taken to correct any violations listed above)

Health information regarding drinking water

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from EPA's Safe Drinking Water Hotline (1-800-426-4791).

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. GRANITEVILLE FIRE DISTRICT 4 is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Public Notice - Uncorrected Significant Deficiencies: The system is required to inform the public of any significant deficiencies identified during a sanitary survey conducted by the Drinking Water and Groundwater Protection Division that have not yet been corrected. For more information please refer to the schedule for compliance in the system's Operating Permit.

Date Identified	Deficiency	Facility
No Significant Deficiencies		

*To be completed by the Water System:
List interim measures, progress to date and any interim measures completed for deficiencies listed above.*

Distribution information

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place and distributing copies by hand or mail.

Barre City

What could we expect to find in our water?

As water travels over the surface of land or through the ground it dissolves naturally occurring minerals and in some cases radioactive material. It can also pick up substances resulting from human activity or from the presence of animals.

Contaminants that may be present in source water include:

Microbial contaminants: such as viruses and bacteria, which may come from septic systems, agricultural livestock operations and wildlife;

Inorganic contaminants: like salts and metals, which can occur naturally or result from domestic waste water discharges and agricultural uses;

Pesticides and Herbicides: that may come from agriculture and residential uses;

Organic chemical contaminants: that include synthetic and volatile compounds coming from septic tanks and careless disposal of household chemicals, and

Radioactive contaminants: that occur naturally.

Who makes the decisions about our water?

Our City Council. We encourage public interest and participation in our community's decisions that affect drinking water.

How is this done?

By attending the Council meetings on Tuesday evening at 7:00 p.m., in City Hall, Council

Chambers, at 6 North Main Street, when there are water related issues on the agenda. The Saturday edition of our local newspaper publishes a notice of these meetings.

Health Information

The EPA (Environmental Protection Agency) establishes regulations that limit the amount of certain contaminants in drinking water, thus providing the consumer with water that is both palatable and potable (safe). Also, the FDA (Food & Drug Administration) promulgates rules and restrictions that limit contaminants in the bottled water industry in order to provide the same protection for the general public.

All drinking water, including bottled water, may contain small amounts of contaminants. Their presence does not always mean that water poses a health risk. However, some people may be more vulnerable to contaminants in drinking water than the general public. Immuno-compromised persons with cancer who are undergoing chemotherapy, who have had organ transplants, who suffer from HIV/AIDS or other immune system disorders may be more susceptible to infections. Other groups at greater risk to infections would be the elderly and infant populations. These people should seek advice from their health care provider.

You can contact EPA's Safe Drinking Water Hotline at 1-800-426-4791 for more information about contaminants in drinking water and their potential health effects. Their guidelines will provide measures to lessen the risk of infection by Cryptosporidium, Giardia, and other microbial contaminants.

Why are we telling you this?

This is an annual report on the quality of water delivered by the City of Barre. It meets the Federal Safe Drinking Water Act (SDWA) requirement for "Consumer Confidence Reports" and contains information on the source of our water, what's in the water and the health risks associated with any contaminants that may be present. Safe water is vital to our community. Please read this report carefully. If you have any questions, you may call the Water Filtration Facility 476-6885.

Where does our drinking water come from?

The City of Barre's water supply is located in the Town of Orange. The surface water fed by streams and springs is stored in three impoundments known as The Thurman W. Dix Reservoir and the Upper and Lower Reservoirs. The Dix Reservoir, designed in 1950, holds almost all (93%) of the raw untreated water.

To help protect the area around the reservoirs, known as the watershed, Barre has developed a Source Protection Plan that was approved by the State of Vermont on Dec. 29, 1997, April 2008 and 2011. The area totaling 11.1 square miles is broken down into three zones based on distance from the surface water supply.

The Plan provides a more comprehensive look at the possible sources of contamination within our watershed.

The 6 million gallon per day water treatment facility receives water directly from the Lower Orange Reservoir. Our treatment process reduces or eliminates turbidity, bacteria, viruses, parasites, color, taste, odor and organics.

The finished water is transported from the facility to the distribution system via a 20" cast iron water main. The system is comprised of two different zones known as the high and low pressure areas. These areas provide water for approximately 15,000 customers.

Highlights of 2013

Public Notice - Permit to Operate Issued December 17, 2013: The Water System is required to notify all users of the following compliance schedule contained in the Permit to Operate issued by the State of Vermont Agency of Natural Resources:

1. On or before September 1, 2014, if the Permittee shall:
 - a. Modify all in-home booster pumping systems to meet the Secretary's design standards, including a properly located and sized air gap, and obtain the Secretary's approval for each in-home booster pumping system;

continued in right column

• Damages to the spillway from the May 2010 flood were completed this November. The 2.1 million dollar project included spillway enlargement and Large Orange Reservoir gate house valve and pipe updates. The project also included pretreatment chemical line installation as well as continuous Reservoir level monitoring.

• Ground was broken for the new Nelson Street pressure reducing vault and in line power generating turbine pump. The turbine is powered by the energy created by water pressure moving through a six inch water distribution main.

• If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Barre is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water hotline or at <http://www.epa.gov/safewater/lead>.

• Water Production – The Facility produced 616 million gallons of potable water.

Key to Water Quality Data Table

• **Maximum Contaminant level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment.

• **Maximum Contaminant level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

• **Action level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

• **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

• **90th Percentile:** Ninety percent of the samples are below the action level (nine of ten sites sampled were at or below this level).

• **Parts per Million (ppm) or Milligrams per Liter (mg/L):** One penny in \$10,000.

• **Parts per Billion (ppb) or Micrograms per Liter (ug/L):** One penny in \$10 million dollars.

• **Picocuries per Liter (pci/L):** A measure of radioactivity.

• **NTUs:** Nephelometric Turbidity Units

• **n/a:** Not Applicable

• **MRDL** Maximum Disinfectant Level

• **MRDLG** Maximum Residual Disinfectant Goal

*The Water System is responsible for the collection of a minimum of 15 bacteriological samples per month

Barre City

WATER QUALITY --- DATA TABLE --- 2013

Chemical Group	Units	MCL	MCLG	Highest Detected Level	Date	Avg.	Range	Vt. Health Advisory	Additional Information	Likely Source of Contaminant	Violation Yes or No
Inorganics:											
Nitrate as Nitrogen	ppm	10.0	10.0	0.10	1/17/2013	n/a	n/a	n/a		Runoff from fertilizer use; leaching from septic tanks	No
Barium	ppm	2.0	2.0	< 0.02	7/29/2013	n/a	n/a	n/a		Poisons, metal plating & photo processing chemicals industrial	No
Cyanide	ppm	0.2	0.2	< 0.01	7/29/2013	n/a	n/a	n/a			No
Zinc	ppm	5.0		0.12	3/3/2003	n/a	n/a	n/a	Added as a corrosion inhibitor	Naturally occurring	
Fluoride	ppm	4.0	4.0	0.90	7/11/2013	1.09	.70 - 1.20	n/a	Fluoride is added to promote dental health / Prevention of tooth decay	Erosion of natural deposits discharge from fertilizer	No
Manganese	ppm	0.05		0.05	4/6/2013	n/a	n/a	n/a			
Organics:											
Bromochloromethane	ppb	n/a	n/a	5.10	10/16/2013	2.87	1.0 - 5.1	None	n/a	By-product of chlorination	No
Bromofrom	ppb	n/a	n/a	< 0.5	1/17/2013	< 0.5	0.0 - 0.5	None			
Dibromochloromethane	ppb	n/a	n/a	< 0.5	10/16/2013	< 0.5	0.0 - 0.5	None	n/a	By-product of chlorination	No
Chlorofrom	ppb	n/a	n/a	90.30	7/23/2013	41.15	10.0 - 90.3	None	n/a	By-product of chlorination	No
Monochloroacetic Acid	ppb	n/a	n/a	< 5.0	10/16/2013	< 5.0	0.0 - 5.0	n/a	n/a	By-product of chlorination	No
Dichloroacetic Acid	ppb	n/a	n/a	13.20	4/18/2013	6.97	3.0 - 13.2	n/a	n/a	By-product of chlorination	No
Dibromoacetic Acid	ppb	n/a	n/a	< 3.0	1/17/2013	< 3.0	0.0 - 3.0	n/a	n/a	By-product of chlorination	No
Monobromoacetic	ppb	n/a	n/a	< 3.0	1/17/2013	< 3.0	0.0 - 3.0	n/a	n/a	By-product of chlorination	No
Trichloroacetic Acid	ppb	n/a	300.00	30.10	7/23/2013	14.86	3.0 - 30.1	n/a	n/a	By-product of chlorination	No
Total Trihalomethanes	ppb	80.00	0.00	94.80	7/23/2013	44.08	11.0 - 94.8	n/a	n/a	By-product of chlorination	No
Total Haloacetic Acids	ppb	60.00	n/a	35.20	7/23/2013	22.33	8.3 - 35.2	n/a	n/a	By-product of chlorination	No
Radionuclides:											
Gross Alpha	pci/L	15.0	n/a	3.76+ 1.27	4/18/2011	n/a	n/a	n/a	n/a	Erosion of natural deposits	No
U226	pci/L	5.0	n/a	< 1+ 0.36	4/15/2011	n/a	n/a	n/a	n/a	Erosion of natural deposits	No
U228	pci/L	5.0	n/a	1.27+ 0.36	4/18/2011	n/a	n/a	n/a	n/a	Erosion of natural deposits	No
Chemical Group	Contaminant Detected	Action Level	90th Percentile	Sampling Date	# of Sites That Exceeded The Action Level	Total # of Sites Sampled	Likely Source of Detected Contaminant	Violation Yes or No			
Lead & copper Action Levels	Copper	1.3 mg/L	0.004	6/13/2012	0	30	Corrosion of household plumbing systems, erosion of natural deposits	No			
	Lead	15 ppb	0.12	6/13/2012	0	30		No			
Contaminant Detected	Units	MCL	MCLG	Lowest Monthly % of Samples Meeting MCL	Highest Measurement Date	Average	Violation Yes or No	Additional Information	Likely Source of Contaminant		
Turbidity	ntu	0.30	n/a	100.00	7/22/2013	0.050	No	Turbidity is a measure of cloudiness in the water. We monitor it because it is a good indicator of the quality of the water and the effectiveness of our filtration process.	Soil run-off		
Disinfectant	ppm	MRDL	MRDLG	FW AVG.							
Chlorine	ppm	4.00	0.20	0.97							